

California GARDEN

SPRING NUMBER

1949

VOLUME 40, No. 1



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Emily W. Clayton, Editor

Editorial Staff

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Mrs. J. T. Scott

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No. 1

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8:00 P.M.

Carnations

An Interview With
Dr. Oscar L. Gabriel by
SEYMOUR E. FRANCIS

One of these days, the finest carnation in the universe will be introduced to a somewhat breathless world by a flower-loving Encinitas dentist who, in his spare time, has built a hobby into what, for any less energetic person, would be a full-time occupation.

The dentist is Dr. Oscar L. Gabriel, whose work with the perpetual flowering carnation during the past several years has brought him wide acclaim, and so many blue ribbons that the wall of his tiny office looks as though it was papered in blue satin.

The finest flower, which he has been seeking for lo, these many seasons, will be the Hazel, so named for his wife, who is as great a carnation enthusiast as is the doctor. Dr. Oscar has named hundreds of prize-winning blooms for friends, for geographical locations, for other members of the family. But he has yet to name one for his wife.

"That," he says smilingly, "I'm saving for the finest bloom in the world."

That development may not be so far away. In the years that Dr. Gabriel has been experimenting with carnations he has developed a variety of colors that, for brilliance, rivals Joseph's famed coat. His success has brought orders from around the world, and, to cite just one year, twelve blue ribbons for single blooms plus a grand prize for his display at the San Diego County Fair. That was in 1947.

Carnation propagation, raising and sale is still just a hobby with Dr. Gabriel. His full-time occupation—and it might be well to put those three words in quotation marks—is operating, with his brother, an Encinitas dental clinic that provides work for seven other persons. It is on week-ends, holidays and evenings that Dr. Gabriel turns his attention to his second interest—working with perpetual blooming carnations.

Each year, thousands of cuttings are shipped, mostly by air, to all parts of the country. He has received orders from, of all places, Hawaii, where the raising of carnations is a big business, too. They're used there for those scented souvenirs so popular with tourists—Hawaiian leis. Most of the blooms are sold to San Diego flower shops, although some are shipped to other sections of the country.

Dr. Gabriel has followed his hobby since boyhood, when he sold the blooms of an Oceanside flower grower to tourists aboard the Santa Fe trains that stopped there regularly. His interest in carnations grew through the years that he completed his early education, and through college.

On graduation, he returned to the "Flowerland of America," and, on the advice of an old friend who was also a dentist, began to practice in Encinitas. Through those early years there were, of course, other interest—establishing a practice, getting married, establishing a home. And finally, as somewhat of a climax, the purchase of land to the north of Encinitas where he and his family live today.

His home has what is probably the

most colorful yard of any in the nation, for it is there that the doctor installed his planting and maturing beds, and his hot houses.

In the thirty years since boyhood, Dr. Gabriel has studied the facts and foibles about carnations, has compared notes with other growers and has come up with blooms of unusual and startling hues. Only green is missing. The catalog issued by Southern California Carnation Grower, which is the firm he established to handle the business details involved in carnation culture and sale, lists the following:

Three varieties of white; four of light pink and salmon; two in medium and dark pink; four in red and crimson. Under novelty and variegated blooms are: orchid with crimson markings; a fuschia purple; a smoke blue, unusual in carnations; bright orange, fringed in red; sulphur yellow with pencilings of deep pink; clear yellow; claret and purple; tawny orange; rich garnet, shading to orchid at the petal edges; peach red with edging and markings of red; purple shading to mauve; heliotrope; apricot and red mingled; orchid mauve; pale lemon yellow.

It was back in 1934 that Dr. Gabriel began to take a really serious view of carnation culture. Until that time, his interest had been more or less that of the average home flower grower; it was fun if it wasn't too much work. But in 1934 he began to experiment with hybridization, and became so interested in the results he obtained that it became his principal out-of-office concern.

Later, he moved to the two acres

north of Encinitas where he now lives, and there he installed two hothouses and many outside beds. The view, when all the flowers are in bloom, presents a sight, as was hinted earlier, sufficient to drive the average color film addict slightly mad.

As his knowledge of hybridization and carnation culture grew, Dr. Gabriel began to fill speaking engagements, and by now has lectured before thousands of garden groups on carnations and how to grow them, and has written at least one pamphlet on the best methods to use. His work has brought nation-wide fame through such magazines as *American Home* and *Oral Hygiene*, and inquiries from other publications.

Dr. Gabriel has carried into his hothouses and experimental beds the sanitation and sterilization practices of the dental laboratory. He recommends steam sterilization to overcome such distracting conditions as nematodes or bacterial and fusarium wilt. At times, as a matter of fact, his instructions sound like the talk of a prescription chemist, what with reference to potassium permanganate, vapo-tone, Dow spray, zerlate, and recipes for potting compost and soil mixtures.

No great investment is necessary to raise carnations, Dr. Gabriel says, and points for proof to the plants he has in old five-gallon cans and in old coffee cans. He's a bug on proper, disease-free soil mixtures for healthy plants.

"The perpetual flowering carnation," he explains, "is not a tender hothouse plant, but is hardy and stands many degrees of frost. It suffers far more from excessive moisture than from low temperature. It flowers in the garden from late spring until winter frosts appear.

"In frostless areas and in the greenhouse it flowers from the age of nine months for an indefinite number of years, provided the plant is kept healthy and free from fungi and insect pests. When you want Winter Bloom, your plants must have plenty of Summer Sun. The ideal temperature for winter nights is from 40 degrees to 50 degrees.

"We propagate from slips or cuttings which are the side shoots produced on the flowering stem. Careless selection of cuttings is the greatest contributing factor to the comparatively short life of the average variety of the carnation. On the other hand,

a variety is improved by careful selection of cuttings."

Dr. Gabriel advises, "Choose the cutting near the middle of the flowering stock. Little or no trimming is necessary. Have a clean vessel, preferably porcelain, in which you place one teaspoonful of potassium permanganate to each gallon of water. The cuttings should not be in the water or the above solution more than ten minutes.

"Be sure to use a sharp, clean sand, free from any decayed matter, of a medium mixture. Place the sand in a flat or use a 5-inch pot with 2 inches of drainage at the bottom. Cuttings should be placed about one-half inch to three-quarters of an inch deep in the sand, and the sand firmly pressed around them. They should be shaded from bright sun until roots have started. Too much air should be avoided.

"The average length of time required to root a carnation cutting is from four to five weeks. Place the rooted cuttings in plant bands in the following potting compost:

7 parts by bulk medium loam
3 parts by bulk Black Peat Humus
2 parts by bulk coarse sand

Adding to each bushel of this mixture—

1½ ozs. Superphosphate
¾ oz. Sulphate of Potash
¾ oz. Hydrated Lime

"Do not plant cuttings deeper in the soil than they were in the sand. Water heavily after transplanting. Do not fertilize newly potted plants until new roots have been made (1-2 weeks), then fertilize with a complete fertilizer." On soil mixtures, Dr. Gabriel uses three parts loam to one part rotted manure or Black Peat Humus, one to one and one-half pounds of bone meal is worked into the soil for each 40 square feet, or superphosphate, five pounds per 100 square feet. The soil should be PH6.5.

"The safest method to follow to avoid the loss of plants, due to soil or weather conditions, and where you do not have a glass house, is to grow the plants in a raised bench or gallon can so the soil in the bench or can does not contact the ground soil, and has good drainage. Have five inches of soil in the bench.

"Use either virgin soil or sterilize with steam, hot water, or Shell D. D. fumigant. Use glass or one of the glass substitutes to protect from fog

and rain. Keep the tops of the plants as dry as possible.

"Plants grown in this manner can be used for stock plants and cuttings can be taken from these plants. The plants raised from these cuttings can be planted in your garden without the risk of losing your stock plants until you are familiar with your garden conditions.

"When the plants are established, they are ready for topping. The top is seldom removed below the third set of leaves, nor are more than four joints commonly left. Each remaining joint will branch. And these branches are, in turn, topped as they become long enough. No feeding should be done until they have been in the bed a month. A complete fertilizer is then applied at the rate of three pounds per 100 square feet about every three weeks. The average distance for setting plants is 10 to 12 inches.

"Above all, avoid overfeeding with the expectation that it will take the place of general good care. When the soil is dusted lightly with lime occasionally, it helps considerably.

"1. Length of stem depends on proper watering; carnations should not be kept too wet and should have comparatively low nitrates (lower in winter, higher in spring).

"2. Splitting is reduced by lowering the phosphate content. Selection of cuttings should be made from non-splitting plants. Weather conditions greatly influence the rate of splitting.

"3. Stiffness of stem is aided by high potash content and high calcium.

"4. Control of red spider: Avoid oil sprays. Vaportone, Dow Spray 17.

"5. Thrips and aphids: Vaportone.

"6. Nematodes—soil: Steam sterilization in raised benches. No complete control for ground beds. Hot water at 180 degrees. Dow fume G, Shell D. D. (not D. D. T.).

"7. Bacterial wilt and Fusarium wilt: Take cuttings high on plants. Soak basal 1½ inches of cuttings in 1 teaspoonful of potassium permanganate in 1 gallon of water for 10 minutes. Steam sterilize sand, pots and soil. Very destructive. Use all precautions. Avoid overhead syringing. Discard all unhealthy plants.

"8. Alternaria blight: 1-2 pounds Fermate or Zerlate per 100 gallons with spreader every 7-10 days.

"9. Bud rot: Spread by mites. Pick off and destroy.

Growing Roses in San Diego

SEPTIMA HARMER

Growing roses in San Diego, this extreme southwestern area of California, with its maximum of sunshine and minimum of rainfall, is a pleasure if one understands and follows the cultural requirements for growing good roses here. There are some problems to be solved as there are distinct variations of soil, degree of temperature and dryness in the distance of a few miles.

Rose growing is not a difficult matter nor is the rose a "fussy" plant. The six major needs or factors in successful rose culture are: proper planting, sensible pruning, dormant spraying and spraying or dusting during the active growing season, adequate feeding, heavy watering, and the selection of the right disease resistant varieties.

The preparation of a rose bed and the planting of a rose bush, a most important matter at any time and place, seems even more essential here as our soil is not a mature one and our rainfall so scanty. In most localities in San Diego one strikes hardpan or adobe in less than a spade's length digging, hence the drainage problem often arises. Roses do not like water standing around their roots.

If the drainage is not good, proper drainage can be achieved by laying drainage tile under the rose bed, or by placing a layer of six inches or more of crushed rock or other material into each hole at planting time; next some compost mixed with well rotted manure and a handful of soil sulphur, followed by a mound of clean soil built up cone-shaped, over which the roots of the bush are spread. The

hole is filled in with more soil, tamped down with the feet and watered well. The bud union, that knob where the hybrid stock is budded on to the wild root stock, should be at the surface to avoid suckering and rotting. It is well to leave a depression or basin around each bush to conserve water.

Plant the bushes away from the hungry roots of trees or hedges, where there is at least four hours of sunshine, and at least three feet apart in the rows.

It is more effective from color and landscaping standpoint to plant three bushes of one color and variety together; the tall growers at the back of the row and the low growing ones together in the front.

As to time of planting, December into the month of April, when bare root roses are readily available at the nurseries, seems to be the best time. Fall planting is of no especial advantage here as in colder sections of the United States. It goes without saying that only the best No. 1 bush with unbroken roots should be planted.

The rose is a long-lived shrub and, like humans, suffers from hardening of the arteries; hence we need to prune out the older, hardened canes to allow new shoots through which the sap easily flows, to develop at the soil level. We need to shape the bushes by judicious pruning, cutting out the weak, diseased, or twiggy growth, leaving the center of the bush open to air circulation and sunshine. All pruning should be made with a slanting cut, just above an outside pointing leaf bud. As to how many buds you leave on the canes depends on whether you are a "high" pruner, a "happy medium" pruner, or a "whacker."

The type and variety of rose must be considered in pruning. Tall hybrid teas as President Hoover or Mme. Chiang Kai Shek, low hybrid teas as Fred Edmunds or Mme. Henri Guillot, to name only a few, resent hard or low pruning. The floribundas and single types also need light or high pruning.

Late January or until the middle of February, depending on development of the new buds, is the right time to prune. This winter, due to the long

cold spell, has been good for roses, delaying formation of leaf buds.

Just a word about pruning climbers; prune them immediately following their heavy flowering and if there is any dead wood in February, cut it out then.

The clean-up or dormant spraying which follows the pruning is the most valuable spraying of the season. If done properly and thoroughly, it solves many of the disease and pest problems which occur later in the season. The ground surrounding the bushes, as well as the now almost leafless bushes themselves, must be sprayed with a full strength dormant spray. All debris should be removed from the rose bed. In fact, keeping a rose bed clean with the removal of dead, diseased foliage and blooms is a wise practice throughout the year. A lime-sulphur spray is commonly used. A new one, "Calsul," has oil added. I use Bordeaux and coat the large pruned cuts with a paste of this.

A systematic program of dusting or spraying must be carried on at regular intervals of ten days to two weeks through the growing season, to combat insect pests and disease. We are not bothered much with blackspot here but we do have powdery mildew and orange rust. Aphis, some thrips and diabrotica beetles, red spider mites. At times those big grasshoppers are our most common insect pests. When aphis and red spider are numerous, I wash off my bushes with a stiff spray of water from the hose. There are many excellent all-purpose dusts or sprays on the market.

Roses need plenty of food, both manures and chemical fertilizers. After the pruning and clean-up spray, about February, apply a heavy layer of cow manure (if you can get it) or the weed-free steer manure which is sacked. A complete rose food on the acid side, alternated with cottonseed meal, can be used almost monthly, or omitted in the near dormant months of November, December and January, and in July and August.

Since both our soil and water are on the alkaline side and roses prefer an acid soil, the use of soil sulphur which is a soil corrector is advised once yearly. A handful of soil sulphur can be scratched into the ground around each bush. Many rosarians recommend using the use of iron, snowform, and magnesium sulphate

"10. Rust: Keep foliage dry. Fer-mate or Zerlate or sulphur dusts.

"11. Mosaic: Select cuttings, build up stock of clean plants.

"As soon as the plants become established, use Better Plant Supports. Disbudding should be done once a week and only those buds removed which are of sufficient size to handle."

All that sounds like a lot of trouble. But it's worth it. One look at the doctor's acres of blooms will prove that.

or epsom salts, as additional aids in this area.

Thorough watering or irrigation is absolutely necessary, because we have little or no rain from April to October. Roses should be watered once or twice weekly, excepting in our rainy and short dormant period.

Mulches are an aid in the reduction of watering, keeping the roots cool, cutting down weed growth, and building up the humus content in the bed. There are many mulches, such as bean straw, peat, manures and compost. I use sawdust because it is easy to obtain and cheap, and because I do not have enough compost. Since some say sawdust uses the nitrogen from the soil too quickly, I first place chicken manure with compost on the bed, wetting it down well and the sawdust on top. I use this mulch in May and again in July or August.

We can grow all varieties of roses in the San Diego area due to our mild winters. Tree roses flourish without any protection. The tender teas, the Banksia roses, Belle of Portugal climber, the old rose, Marechal Niel, and many others do well here. Roses bearing the letters AARS are always recommended. However, there are many good unpatented roses, among them the excellent red rose, Etoile de Hollande, still one of the best sellers after thirty years on the market, McGredy's Ivory, Mrs. Sam McGredy, Picture, Lulu, J. Otto Thilow, Mrs. Pierre DuPont, Mrs. E. P. Thom, Hinrich Gaede, and the Radiance rose, both the red and pink. We do find that roses with fewer petals, seem to thrive better near the bay and ocean, and those with heavier petalage further inland.

There is a type of rose for every landscape effect desired. For a bright long blooming hedge try some of the floribundas, or even the rough-leaved rugosas. The Wichurianas, as Evergreen Gem, make good ground covers for a bank; and the baby roses, Rosa Rouletti, and others make a nice border for a pool. Climbers, trained as pillars—the new High Noon is a very good plant for this effect—are most attractive.

It is certainly true that roses can be grown successfully anywhere if the cultural requirements for the region are studied and followed. Here in the San Diego area, often described as a "semi-desert region facing the Pacific Ocean," that Biblical verse transposed

New Garden Books

EMILY W. CLAYTON

Gardens in the Modern Landscape by Christopher Tunnard.

Published by Charles Scribner's Sons, March 14, 1949. \$5.00

This book by Professor Tunnard was first published in England in 1938. It is now brought out in a revised form which includes considerable material on American gardens, the fruit of the years since 1938 which Christopher Tunnard has spent teaching and designing gardens in this country.

In his Foreword to this new edition the author says, among other things, "The opinion expressed in this book that the eighteenth century invention of landscape gardening was among the most notable of British contributions to the arts has been reinforced by observation in America, where, as an article for export it seems to have again proved its excellence. Some day an account must be given of the English tradition in American gardens. . . . This must be done before the great estates of the Eastern seaboard go the way of their English counterparts, as they will do. . . ."

Those familiar with *Gardens in Modern Landscape* in its original edition do not need to be told that this is a book of unique importance in that it deals with contemporary garden design paralleling the movement in contemporary architecture.

In the first sixty-eight pages, Tunnard writes of the development of landscape into garden from the beginning of the eighteenth century to the first part of the twentieth. He writes with both sympathy and erudition, and even finds something good to say of Victorian gardening. In fact, Professor Tunnard writes so well about the gardens and garden planners of the past that the reader goes on to the chapter headed "Towards a New Technique" with some reluctance.

However, this author writes almost better about the future of garden design than the past. He looks forward to a kind of designing not yet generally achieved of which he says: ". . . the modern garden should be

to "The desert shall bloom with roses" can be literally true.

the logical outcome of the principle of economy in statement and the sociological necessities which have influenced modern architecture."

The book shows that Japanese garden design has much to teach Europeans about the relationship of house and garden. But in this, too, the author is careful to emphasize that, as Orientals use their gardens differently from Occidentals, transplanting the Japanese garden *in toto* is a mistake.

Assymetrical compositions, in general, Professor Tunnard thinks, are more harmonious with modern living and modern architecture than the formal, axial gardens of the past. He says, ". . . it would be a loss to architecture if symmetry were frowned on, but it would be neglecting a wide field for experiment to remain content with the old axial and symmetrical conception of garden planning when a form directly in sympathy with modern aesthetic needs is asking to be employed." He leans toward green gardens made up of a variety of textures and paved areas, rather than the herbaceous border of the cottage garden type.

Throughout this book, the relation of landscape architecture to the other arts, architecture, feeling and thought of a period is stressed. There is an important section on city planning and the gardens that should be integral to such planning.

All chapters are beautifully illustrated with pictures of gardens of the past, present and future. The whole book is well printed on coated paper. Professor Tunnard brings both the background of a scholar and the experience of a landscape architect to his book. It should be on the shelves of anyone even mildly interested in garden design or city planning. *Gardens in the Modern Landscape* has a bibliography beginning with Le Notre and ending with Lewis Mumford. It also includes an essay on "The Modern Garden" by Joseph Hudnut, Dean of Harvard University. There is an index.

Shrubs for the Milder Counties by W. Arnold-Forster.

Published by Charles Scribner's Sons, February 28, 1949. \$10.00

Shrubs for the Milder Counties

though written in England for the milder English Counties is a fine reference book on shrubs for California gardeners. Many of the shrubs listed and described are suitable for California gardens both northern and southern. And especially for seaside gardeners, is this book a desirable acquisition since the author has experimented for years on the Cornish moors to find shrubs which flourish in spite of high, regular and salt laden winds. La Jolla, Laguna Beach and Monterey can make good use of this experience.

The chapters on Acacias, Ceanothus, Eucalyptus are all of particular interest to us here in southern California. Northern Californians will like the one on Rhododendrons and Azaleas. Though, today, we are beginning to grow these lovely shrubs with some success locally.

A chapter on Magnolias is the work of a great authority in that field of horticulture, Mr. G. H. Johnson. His enthusiasm for his specialty and his descriptions of varieties should do something to encourage local gardeners to plant more Magnolias which do well here and are one of the most beautiful of flowering trees.

Mr. Arnold-Forster also has a chapter on "Uncommon, Untried or Tender Shrubs" which includes many of the plants we have imported in recent years from Australia and New Zealand.

The author's chapters on planting for roadsides and towns is both intelligent and practical. He has sensible suggestions about such planting, suggestions as workable in California as in Cornwall. Bad planting, he points out, wastes money, labor, plants. Good planting results in " . . . beauty that can be publicly shared."

It is quite surprising to find how many of our semi-tropicals can be successfully raised in England, even in the "Milder Counties." But the English are a nation of gardeners.

This book is generously illustrated with fine photographic plates showing many of the shrubs discussed. It has an index. There is a foreword by the Rt. Hon. Lord Aberconway, president of the Royal Horticultural Society. The book is published under the auspices of the Cornwall Branch of the Council for the Preservation of Rural England.

Conservation

ADA PERRY

I don't want to bore you, but I think you ought to know about my job. You see, I've had it for seven years and I'd never even heard of it when I went down to apply. And it had been going on seven years before that, at least. So it's probably still news to people in floral circles who haven't had occasion to go down and apply at the San Diego County Agricultural Conservation Association for a job.

First off, conservation is an extremely important subject that touches all of us in some way even if we haven't taken time off to consider the San Diego County Agricultural Conservation Association. Saving the redwoods and wild life conservation are probably well-known endeavors to Floral Association members.

By the way, I've wondered at people who shrug off the office as just another government agency. How do they expect a government the size of ours to be run without agencies and bureaus and plenty of them? It should be run by one department maybe? A fine thing!

The political implications, due to the fact that it was started as the Agricultural Adjustment Agency along about 1933, bother me not at all. I'm not that strong a politician. Besides, you'd better not be in our office. You sign papers to that effect (won't use your position to campaign politically or some such thing—believe all government employees sign such a paper). To tell the truth, I haven't paid much attention to it, figuring the conservation was the important thing.

Going back to the bureau idea for a moment, or agency or office, or whatever you want to call it, the various branches of our government's work are extremely interesting once you start paying attention to the subject. It would be a lifetime's study for anyone who wanted a hobby. It's been going on since 1776 or thereabouts and now they keep trying to ding into us the tremendous scope and influence our government has achieved. Must be something to the system. We don't seem to realize it too good.

I'm in just one little tiny corner of the great U.S.D.A., United States Department of Agriculture. It's one

county's representative of one part of the Production and Marketing Administration as we are now known. Each county in the state has one and there is a state general office. Almost every county in every state has one and each state has its general office and there are regional offices and a national office in D.C., naturally. We offer government financial assistance to farmers for conservation practices that save water and prevent soil erosion.

Did you ever stop really to ponder on how ugly a gully is? You have, if you've done some current reading. The slaying of the gully dragon is a national matter. It's important, like the campaigns against infantile paralysis and heart disease. We can't let those things go on, for the future welfare of our nation. We jolly well better not let soil erosion go on, either.

That's why a farmer can get additional satisfaction out of a dam—it's part of a group movement and just as important as any you can tick off on your ten fingers.

You'd be surprised at the little old regular office routine it takes to put the San Diego County Agricultural Conservation Program into effect. Typing, filing, correcting records and—a variation—spotting farms on aerial photos and making tracings of them. The Conservation Program varies each year and farmers are mailed copies of it annually—their plans for conservation practices that year recorded and budgeted. Later their reports of what they have performed are obtained. Well, you know how much work it takes to implement anything.

But this year when you're driving about the back country and see a dam going in, a reservoir being lined with concrete, or a permanent, up-to-date sprinkling system going in to reorganize a wasteful old irrigation setup, you may note in your mind, if you like, that this work may be in the government's program to save water and prevent soil erosion.

In the cattle grazing areas, you might see new pipe lines, new wells, new spring developments, new water storage structures, and figure that these also may be in the government's program to prevent over-grazing of range land around old watering places and thus prevent soil erosion.

Oh, did I tell you where the office is? It's on the second floor of the Chamber of Commerce Building.

Strelitzia, the Bird of Paradise Flower

ALICE M. CLARK

Winter visitors to San Diego are particularly struck by the startling beauty of the "Bird of Paradise" flower. If they come here to live they want to know more about it so here are some facts on the origin and culture of this interesting member of the Museae or Banana family.

A bound volume of the Curtis Botanical Magazine in our Natural History Museum was the source of some of my material. In the quaint gothic print of 1790, with "s's" like "f's," volume 4, page 119, gave a detailed description of the plant I was seeking, accompanied by hand-colored illustrations. Garden magazines were works of art in those days!

There I learned that this fascinating flower had been considered a species of heliconia, an exotic much admired in Hawaii today. Sir Joseph Banks discovered it on the Cape of Good Hope in 1773 and introduced it to the Royal Gardens at Kew. He then created a new genus for it, which he called *Strelitzia*, and named the species, *Reginae*, for Queen Charlotte, wife of George III of England. Her family was Mecklinburgh-Strelitz, well-known patrons of botany. I quote: "... one plant flowered in the pine stove of Bamber Gascoigne, Esq., several years ago, from whence Mr. Miller drew his figure, and the plant from which our drawing was made flowered this spring in the bark stove of the garden belonging to the Apothecaries Co. at Chelsea." Think of the time when hothouses were maintained with stoves and drug stores had gardens!

In *South American Plants for American Gardens* by Coombs, the species *S. parvifolia*, Dry, and its variety, *juncea*, Ker. are described without any story of their origin. Bailey lists *S. kewensis*, a hybrid unknown here. A little paragraph in the 1887 volume of "The Garden," one of a set owned by the S.D.F.A., says: "A *strelitzia* in the Palm House at Kew Gardens has pure yellow bracts. It was brought from South America by Mr. Watson last spring and named *S. reginae*, var. *citrina*." *S. lanceolata* is a newer introduction which I cannot find in literature.

Geographically, all these species seem to originate in South Africa. A local enthusiast, who has traveled there, reports that they are found along the south and southeast coast instead of inland. They are never in swamps but rather on rocky land back up from the rivers among the giant euphorbias. There they would have good drainage in the monsoons and their long roots could tap the river water in the dry seasons.

In general, the *strelitzia* family falls into two main groups. We are here concerned with the low type whose leaf and flower stems rise directly from the crown. The second form which is very large, with leaves that build up into a woody trunk, will be treated in a later article.

For culture and varieties I have consulted Mr. Dayton Laing of Kentia Palms Nursery, National City. He has 3,500 *strelitzias* of many types and ages, including a new dwarf variety of his own. He gave me samples of the different species, as near as they are known today.

Now, a few words about culture. Mr. Laing says that *strelitzias* are very hardy. They will stand almost any soil and any exposure of wind, sun or shade, but he grows his under light lath. They have just come through their hardest winter, when the thermometer went down to 19 degrees. The tips and sometimes the leaves and flowers that were frosted are all dead, but a new crop of blooms have been cut since then. The seed crop, which was not far enough along to harvest, was the greatest loss.

Mr. Laing has remarkable results in obtaining seeds. They take skillful hand pollination and much patience to wait the eight or nine months for them to mature. They are picked as soon as open and dried indoors. With bottom heat, they may be planted any time. Home gardeners can use a fern pot filled with sand and peat, or sand and vermiculite. Soak the seed forty-eight hours, plant a half-inch deep and keep moist. Germination is usually in thirty to sixty days, but some may take years. Transplant when they get their first leaves, which look like corn, and increase to a larger pot when needed. It will be a

long wait for the bloom—seven years—but it is worth it.

Leaf stalks grow straight up from the base, in a group, like fingers from a hand. This is called a division. These each double every year as in compound interest. *Strelitzias* live a long time and may spread ten feet across. Make divisions only from June through August. Dig the clump carefully and wash all soil off the roots so you can see where to cut the natural divisions. Plant in an acid soil of leaf mold, sand and loam. Mr. Laing does not use dairy manure because of the weeds, but he does mulch with two to four inches of rabbit fertilizer and sludge. Irrigate deeply and as often as the weather and type of soil require. Be certain of good drainage. Every other year the *strelitzias* are treated to an application of commercial gypsum or soil sulphur, to maintain the acid content.

A division, made and planted in June, may bloom in the fall. The second year it will have one to six blooms. Do not cut the leaves as they are needed for reservoirs and you might lose the flowers that start from their bases. That is why you see no natural foliage at a florist shop and it also may account for flower scarcity in your own garden if you have been using the leaves. Flowering season is from August to May, with scattered blooms from older clumps at any time.

There are few pests on *strelitzias*, though the nectar is very attractive to ants, which should be kept under control. Aphis and red spider will show sometimes but they are easily cared for with the many sprays for that purpose.

As *S. regina* is carried by most nurseries, I shall use it to describe the parts of the low-growing type. It has been hybridized for so long that there are many variations from the closest approximation to the original species that Mr. Laing was able to find for me.

The very long and very numerous roots of *S. regina* are over an inch in diameter, with the look and texture of a new potato. The divisions are fairly compact. The leaves of all species vary with their age and health, but this plant has a thicker leaf stalk than most and a wider and longer blade. The former will average about

three feet with the latter one or two feet more. When unfolded, the leaf is shaped like a long feather, four to six inches wide, with a sunken yellow quill down its center and parallel veins across its green length. The gray-green back is etched with fine lines. The leaf is thin, smooth, strong, firm and resilient, straight on the edge, except for a few ruffles and scallops towards the base.

The flower scape is thinner and rounder than the petiole, to which it is attached at the base, and is tightly clasped with red-tipped bracts. The one near the top extends a trifle above the neck of the "bird" in this species. The terminal bract is bent almost horizontally, making a pointed boat, six to eight inches long to hold the flowers. It is green, suffused with rose at the joint and along the edges.

The flowers take some time to pull out of their tight case. First two concave, lance-shaped sepals, three to four inches long, on a short white base, pop straight up when they are free, like the ears of a startled deer. They are followed by the blue petals. The third sepal emerges with the second flower. It fits underneath the petals and has a strong rib at the bottom.

The flower formation is most unusual. A small, keeled blue hood at the base of the two sepals is the upper petal, partly covering the two lower ones, which are about three inches long, fused to a point at one end, widening, arrow-like, to a deep rounded lobe on each side, two-thirds of the way back before they are rolled into a narrow shank. There is a hollow channel down the center, grooved below, with fine fluted edges above, like the gills of an oyster. This hides five stamens and much mealy white pollen which is only exposed by the weight of a small bird or insect. Attracted by the thick syrupy nectar, they carry it into the throat and back over the sticky white stigma at the tip of this landing field. The local bees are not heavy enough, which explains why the flower must be hand pollinated. When the stigma dries you can see the three short parts that are attached to a long, thin, bristle-like style connecting it to the ovary in the white neck. The first flower in the spathe is followed by another and then by a third before the first has faded. So there is always a saucy blue and orange cockade on this gay flower-



Strelitzia Species

With comparative leaf forms

No. 1, *S. parvifolia*, showing spathe with several open flowers and two club-like leaves.

No. 2, *S. parvifolia*, var. *junccea*, showing flower just emerging and characteristic rush-like leaves.

No. 3, *S. reginae*, showing two large, long leaves. In this species, note the bract, like a high collar around the neck of the spathe. Not usual in hybrids.

No. 4, *reginae*, var. *citrina*, showing dark bud and two short, wide leaves.

No. 5, *lanceolata*, tallest of the type. Flower shows extra bud sheath occasionally found on all varieties.

COVER DESIGN

Leaf and flower of *S. reginae*, with enlarged view of open seed-pod in dried sheath.

bird's head dress until eight or more are spent.

When the flower has been pollin-

ated, the ovary expands into a rough brownish pod that, when ripe, splits into three sections as pretty as another

blossom. A raised ridge, forming a center vein down each "petal," is heavily tufted with orange wool, into which nestle the double rows of black pearls. The orange fluff arching across an ebony seed, like a bright cockscomb, makes it high among nature's beautiful seed-jewels. With twelve or more of these handsome capsules to each of the three sections, and as many as three fertile pods to a spathe, one can see how Mr. Laing could get a hundred seeds to a stalk.

The flower pattern of *S. reginae* holds true for other species, with a few exceptions. But the leaf form varies greatly, hence the sketch to help you visualize the differences.

In proportion to its stem, *S. regina* has the longest, widest, most open and graceful leaf. Its variety, *citrina*, has a wide blade about a foot long with a decidedly rounded tip. This is cupped like a petal because the stiff center vein stops two inches from the end. It is marked by this as distinctly different from its pointed fellows and much more like the giant type. A specimen may be seen here in Montalvo Gardens Nursery. It is a later bloomer so I could not observe the color of the flowers, which Mr. Laing describes as a watery yellow. It is very rare.

A. Parvifolia is of open habit. The leaves look like clubs on the end of long stems as they are three by seven inches long, cupped and folded to show the gray of the under side. The spathe has an exposed neck, showing more of its rose color. The petals are a very much lighter blue. *S. parvifolia*, var. *junceae* (meaning rushlike) is easy to identify, as its whip stem could hardly be called a leaf. However, it does make the gesture of widening a half inch on each side of its last seven inches. The flower spathe has a rich red color that is even suffused into the throat, so it seems the brightest of all. Coombs says that the petals are white but Bailey's description agrees with our blue ones. The growth is compact.

An open plant with the tallest leaves is *S. lanceolata*. They may exceed six feet. The blade is three and a half by twelve inches, tapered to a point. The spathe is more mauve in color, with a lighter rose on the exposed neck. Like all the other varieties the flower stalk rises above the leaves, so *S. lanceolata* is the giraffe of the family.

The cut blooms of all strelitzias are splendid for flower arrangements, as they last for six weeks in water. Remove the old petals as they fade. Distinctive corsages, that hold up very well, are made of a combination of several blooms. Mr. Laing says that the flowers may be picked and shipped by air without even standing in water beforehand. If expressed by rail, wrap the last four inches of the stem in wet cotton.

Strelitzias should appeal to those who love color, as their primary shades of rose, yellow and blue are not combined in any other flower that I can think of. If our English cousins could grow all of the strelitzias under glass over a hundred years ago, every gardener in southern California should have at least a few of these plants that lend such an exotic touch to the garden, while providing beautiful blooms to bring the sunshine indoors in winter.

* * *

Flower Shows

The Southern California Spring Flower and Garden Show sponsored by the Pasadena Flower Show Association on March 10, 11, 12 and 13 at Brookside Park was completely delightful. The fine horticultural center makes an ideal setting for a show that evidences experience and the best efforts of the show committee and the exhibitors. No visitor could fail to be impressed, not only by the flowers themselves, but by the labor and expense which displayed them so perfectly.

The professional exhibits of small gardens in the first building were an exquisite introduction to a show that was spring itself. A background of evergreen with topiary terminals to mark the ends of the gardens and gothic arches at one end of the building were a most effective feature. The magnificent orchid display behind the pierced evergreen screen looked, at a distance, like stained glass. The variety of specimens displayed was great although some of the loveliest individual flowers were shown in exhibits not primarily devoted to orchids.

Dreamlike small spring gardens of azaleas, camellias, primula, were as lovely in their ways as the orchids

themselves. Several used great branches of flowering fruit trees—always the most romantic of spring blossoms.

The outdoor garden displays were as flawless as those indoors. They included particularly brilliant displays of cyclamen, primroses, azaleas. A couple of the many women's groups making entries presented vegetable gardens with a touch of humor, and one with six fluffy ducklings. For all of this the green hillside shaded with trees gave the show a flavor which wholly indoor shows can never quite achieve no matter how beautiful they are.

There were fine exhibits of specimens of camellias, carnations, daffodils, ranunculus, stocks, and a few tulips and iris. The camellia section was particularly complete and a number of fine plants were shown as well as the individual blooms.

The large flower arrangement classes, while interesting, were not as outstanding as other parts of a show which set itself an extremely high standard.

All the arrangements for the show were well organized. There were plenty of places to sit down, the commercial section was completely separated so that those who wanted to buy were not in the way of those who only wanted to look. There was a sandwich room for the convenience of visitors who forgot their lunch hours, and the weather, for the first day anyhow, was wonderful. What more could anyone ask?

March 26 to April 3 the Southern California International Show will be held at Hollywood Park in Inglewood. This will be the first of these shows in some years and promises to be an outstanding occasion. Garden lovers who were unfortunate enough not to get to the Pasadena show have something to look forward to that is more than a consolation prize, although many of the first spring blooms will have passed their prime.

ROSES

Give the roses a good feeding in June of complete balanced plant food together with removal of all spent blooms will bring a fine crop of flowers for the fall. Specially during the real summer months do roses require dusting and spraying that is regular and vigorous.

Our Wild Flowers

ETHEL BAILEY HIGGINS

Asked for something on the spring flowers pictures flashed before my mind:

Of our nearby hills and mesas, with the blue *Brodiea*, sometimes called wild hyacinth; the little wild onion with its characteristic odor, and its dainty flowers, each white petal with its little pink stripe; the yellow pansy violet and the Shooting Stars so like miniature *Cyclamen* blossoms (and indeed closely related); the blue-eyed grass and, daintiest of all the spring blossoms, the tiny little fringed *Gilia*, with its fine foliage and little pink flowers, each petal fringed, creating a sense of fragility; the *Mariposa* with its lilac petals and blue anthers.

Of a hillside near Otay Lake, one mass of yellow, the gold of our California Poppy, the color scheme carried out by the lines of blue Lupines. Here also is to be found the Chinese Houses, so-called because of the resemblance of its inflorescence in outline, to the Pagoda. Not conspicuous, but a delight, is the little *Tillaea*, an annual, the dwarf Stonecrop, with its bronzy foliage. Incidentally this is to be found on many a vacant lot.

Of the brilliant scarlet of the Indian Paint brush, peeping from beneath some shrub of the magenta Owl Clover or Escobita. Little broom is the Spanish name for them. Of the coastal *Bisnaga*, spectacular with its scarlet spines and silky, almost translucent yellow fringed blossoms. Beware of this because it is almost hidden by grass and weeds, and has very vicious spines, capable of penetrating the sole of the stoutest shoe. Of the *Dudleya* or Stone crop, our familiar Hens and chickens, with its rosette of leaves and tall stalks of orange red flowers; this also is found lurking in the shade of some shrub or protected by a stone which is its backguard.

The *Ceanothus* or Wild Lilac is one of the glories of the springtime. One of the earliest is the coastal white-flowered one which may be found in any little canyon about the city. A little later the light blue such as is found in masses near Alpine and on many of the grades in the back country; later the dark blue of the

Lakeside *Ceanothus* (so much cultivated) and the lovely feathery white-blossomed one of Palomar and Cuyamaca. Never will I forget my first acquaintance with these beautiful plants. Strolling up a little canyon, I became aware of a soft haze, and looking up I saw the hillsides on either side covered with the misty blossoming of the *Ceanothus*, a sight never to be forgotten.

On the Buckman Springs road, the stretches of *Penstemon spectabilis*, the violet Beardtongue. I came to California in 1889, a tourist (and I am still here); one of the unforgettable sights was a group of Live Oaks carpeted with these beautiful flowers, it was where is now the Santa Anita Race Track. It seemed to me a sight which well repaid a journey of 3,000 miles. Occasionally on the Buckman Springs road, another of the *Penstemons*, the Scarlet Bugler, is to be found. This grows in many places but in its real splendor, in the desert below Banner, where its brilliance lines the road.

The *Penstemons* are to me the most interesting of all our floral wealth. I believe they would prove to be well worthy of cultivation, and give a valuable addition to our gardens if improved by cross breeding. There are several interesting natural hybrids existing. But this is not for me. I am like the little boy who was watching me in the garden and to whom I explained about the planting of seed. Immediately he wanted to do this, so together we put them in the ground. Two days later he led me to the place where we had planted them and in tones of reproach said "no flowers."

There is with the *Penstemons* abundant material with which to work. The Climbing *Penstemon*, sometimes called Wild Honeysuckle, with its large scarlet flowers (the nearest locality I know for this is on the hills above Rose Canyon), two scarlet ones to be found late in the season on Palomar, a pink one which is found in the desert in late May are only a few of our beautiful species. In the desert are several more than the two mentioned. But there is so much in the desert of interest, that they must be forgotten for the time.

Fields of the Thistle Sage are to be

seen. This *Salvia* with its prickly gray green foliage, violet flowers, and lipstick red stamens is a wonderful sight. Cacti of different kinds are among the desert attractions; the Beavertail with its gray green pads tinged with pink, and its brilliant magenta flowers; the Engelman Cereus or torch cactus with its flowers of the same color, its bright scarlet fruits enclosed in a network of creamy spines. There is the "Jumping Cactus" (*Opuntia Bigelovii*) whose joints, while they do not exactly jump, are so easily detached that they seem to do so. Beware stepping on one of these joints for they are difficult to dislodge and painful to endure.

The Barrel cactus with its brilliant spines looks like a hugh bouquet. It is said that enough liquid can be obtained from this to preserve life, but it is acrid and disagreeable so do not meddle with it! Its flesh is the source of the cactus candy. The *Ocotillo* is easily one of the most spectacular plants of the desert, with its brilliant scarlet pennant. The Desert Agave rears its stalk of yellow, nectar-laden flowers, a striking plant of the desert. Last year when the desert was barren because of lack of water, it was the one thing in the dry expanse that bravely carried on. At intervals of about twenty feet, one of these yellow banners reared itself aloft, the one most striking feature of the desert. The small, brilliant annuals which constitute the floor cover were entirely absent. This year, they should appear in abundance. The desert sand verbenas, the little magenta monkey flower, the yellow of composites and of little Evening Primrose all contribute to the colorful carpet. But the one I like best of all is the Desert Star. Little mats of spreading leaves and the tiny starlike white daisies, form one of the daintiest sights that can be imagined. Of course, the Creasote bush with its shining green leaves, yellow flowers and fuzzy little white balls which are its fruits; the Desert senna which with no leaves, forms mounds of gold; the Catclaw which is well named, as bleeding hands have often informed me, and others too numerous to mention, all contribute to the enchantment of the California Desert.

Along the Campo road are encountered many interesting things which attract attention. Among them is the Campo Pea, the Pride of Cali-

fornia. This crimson pea is most beautiful, but please do not pick it. In a day it will lose its brilliant color and be a faded, dirty white. I have seen people strip the vines only to throw them away for they very quickly lose their beauty. Here I saw another unforgettable sight. The Campo Pea was in bloom; a light snow had covered the bushes on which it climbed, and the sight of the crimson blossoms against the white mantle of snow was startlingly beautiful. That might well be repeated this year.

In going so far afield, we have neglected our waterfront. The sand dunes of our beaches are perfect pictures, beautiful with their combination of color. The fragrant blossoms of the pink beach sand verberna, and the yellow of the beach Evening Primrose cover the dunes, while on the beach are found other equally interesting things. The Beach Convolvulus with thick, leathery leaves, has an interesting habit of hiding its flowers in the drifting sand. The Ice plant gives color with its green, red and purplet foliage, covered with crystalline vesicles, which give them the appearance of being encrusted with jewels. As if this were not enough beauty for this little plant, it blossoms with dainty, feathery white starlike flowers, which stand out against the jeweled background of its leaves. It is an annual, but so attractive that I once saw a peculiar occurrence. A meeting of the Cactus and Succulent Society was held in a commercial cactus garden in San Diego. The owner potted tiny plants of this Mesembryanthemum in two-inch pots and sold them for ten cents each.

Along the ocean bluffs grow such things as the sea Dahlia (*Coreopsis maritima*) with its fleshy root, finely cut foliage and large yellow flowers; the Wallflower with large clusters of yellow or orange flowers; the shrub, *Rhus integrifolia* which is the Lemonade berry; several cacti, such as the prickly pear type, *Opuntia littoralis*, and the Cholla *O. prolifer* which has a most interesting habit. Instead of the fruit maturing and falling, another blossom comes out of this fruit, until adding one each year, they form long chains. I have counted as many as sixteen in a chain. The flower is of a chocolate color.

Your Garden

April, May, June

In our part of the world these are the best garden months. This is the time to admire your garden, to work in it, to fill the house with flowers. Later most of our gardens begin to go down hill a little at the very time that gardens in other parts of the country are just beginning. However, even after these months come zinnias, chrysanthemums, dahlias so all the glory is not gone with June.

April: All seeds can be planted in this month. Gladiolus corms should be planted right along for continuous bloom. This is a month for taking Chrysanthemum cuttings. They should be planted in flats in moist sand and transplanted whenever their roots are about two inches long. Dahlia tubers may also be set in moist soil this month. They must be watered regularly until the sprouts are over half a foot tall. It is a time for planting Dahlia seeds, too. This is one of the best months for lawn renovation either by hand or power raking of the Bermuda grass strands. Reseed and water three times a day till the seed sprouts. Seeds of Dianthus, Linaria, Annual Phlox, Annual Larkspur, Zinnias may be planted in April. Be sure not to cut down the leaves of the bulbs that have finished blooming until they are brown. For neatness they may be braided and pinned down with a small stake. April is a month for garden pests and spraying and dusting must begin.

May: Keep planting Gladioli, Asters, Zinnias, Marigolds, Verbenas, Lantanas, Petunias, Natursiums, Heliotrope, Cyclamen, Violas, Columbines, Day Lillies, Azaleas, Lobelia, Fuschias and Agapanthus may also be planted. Chrysanthemum plants should be big enough in May to go into the beds. If you have not taken cuttings of your own plants earlier, the nurseries should now have the small plants in pots for setting out. Keep your Fuschias clean with an overhead spray to avoid thrip. Plan to use a good oil spray all summer. Keep after garden pests with regular dusting and spraying. Remember to

water regularly and deeply. Soak the drying soil to a substantial depth.

June: Pinch off the tips of your growing Chrysanthemums—remember to keep them pinched back from week to week. This is the month you set out the plants for which you sowed seed in flats in the earlier months. Many Iris growers recommend separating and resetting Iris at this time. The garden has been growing hard for some time now and using up the nutritional value of the soil. It is time to add fertilizer and probably humus, too. If you did not renovate your lawn in April or May the old lawn could probably stand some fertilizer at this time, too. It is time now to begin thinking about next winter's garden and to make lists for it. Many of your bulbs can be lifted, now, to make room for other flowers. Clean them and let them dry before storing them for the fall. From now on it is unlikely that you can over-water.

THE CALIFORNIA POPPY

How many know and appreciate the flora of their own state? Possibly if more people were interested in their native wildings the danger of their extinction would not be so great. Various clubs in California have joined the movement to restore the California Poppy to its former glory by planting vacant lots and the state highway roadsides with this flower of gold. Certain Indian tribes named this golden Poppy of California the "Great Spirit Flower"; indeed the beautiful names given it are legion. The early Spaniards used the plant for medicinal purposes and steeped its leaves in bear oil as a tonic for the hair, claiming it imparted a sheen and induced a wonderful growth. No artist has ever been able to do justice to this flower for he is unable to impart the satin sheen of its thick rich petals to canvas. California ranks first, it is claimed, in the number of flowers.

DRY NOTES

Species of *Cistus* (rock-rose) are wonderful for dry places and rock walls. Do you know *Cistus villosus*? Rather dwarf, 12 to 18 inches, leaves and young stems shaggy with whitish hair. Large flowers of rose with yellow base all summer.

Random Musings Of an Iris Fan

S. H. CARSE

The recent freeze in San Diego did less harm to my iris than I had feared. Certainly, some varieties which are never recommended for planting in the East because they are so tender, have suffered, but it is still too soon to know the worst. * * * Nature helped me with one hand while dealing a vigorous blow with the other. Since my soil is heavy, I plant rhizomes with the top just at ground level. The early rains washed quite heavily onto the iris beds and covered every rhizome with an inch or more of soil before the freezing weather came, so that practically all of my newest and most expensive plants have seemingly weathered the storm thus far. Not that the little new fans just coming out of the ground did not get hit. Every one of them has a black tip from the frost. * * *

All this cold rain and lack of sunshine is likely to bring on a fine attack of "mustard seed fungus" unless I get the clumps opened up to let in what little sunshine there is. And I must clean away every bit of dead leaves and litter. Then, if it ever stops raining long enough, I must spray with Semesan in liquid solution. One spraying should be enough. * * * Just read a comment on *Ola Kala*—"Stunning color, that's all. *Berkeley Gold* is better." I don't agree with that at all and I have both. But, then, if it were not for differences of opinion, we would have no horse racing. * * *

Just finished weeding and clean-up of bed where I planted last year's acquisitions. This bed is fifteen by twenty feet and holds some twenty-seven varieties. Happy to find that *Ola Kala*, *Lady Mohr*, *Coloma*, *Mother Lode*, and *Snow Flurry* and *Blue Rhythm* have all come through unharmed. In fact, the only casualty there seems to be *Capitola* which I should hate to lose as it is a wonderful hybridizer. It may come back but it looks pretty sad right now. * * *

Add to casualty list—*Deep Mahogany* and *Beverly Hills*, both *Millikan* introductions, and *Sleepy Hollow*.

Cannot see why those *Millikan* iris should go but they did. On the other hand, old-timers like *Ukiah*, *San Francisco*, *Shining Waters*, *Easter Morn*, *Day's Farewell*, *Rancho*, *Happy Days*, *Mme. L. Aureau*, *Sierra Blue* and even the *Mohr* oncobreds, *Elmohr* and *Ormohr*, have done beautifully. * * * Was much intrigued at a recent meeting to hear reference to the "San Diego Iris Society." I wonder why none has ever been organized here. In fact, I wonder why, in a city of practically four hundred thousand people, the last list showed only six local members of the American Iris Society. Maybe the new list, due any week now, will show that we have doubled our membership here and are now twelve. * * *

Just learned that the Spring Show of the Floral Association is to be held May 7-8 in Balboa Park. Normally this would be a week behind the peak blooming season but with the cold winter we are having, anything could happen and it might turn out to be too early. * * * Inasmuch as I was prevented from getting my Christmas fertilizing done on time and the weather ever since has not permitted any such foolishness, I am going to have to resort to a trick that has worked before. Once I am sure that the freezing weather is past, certainly not later than March 1st, I will apply Sulphate of Ammonia, watered in well, then follow with *Vigoro* and *Bone Meal*, mixed, and well dug in. The effective times of these differ to just the right degree to serve as successive stimulants. * * *

How I envy you fortunate people who have no pests worse than snails to combat. By buying *Buggeta* in 25-pound packages in the pellet form and broadcasting it, I can eliminate myriads of snails and slugs. But—what do you do for opossums, squirrels, gophers and—oh, yes—cats? The gophers are the real problem with their honeycomb of tunnels. My only real success in the unending war with them has been through the use of traps, *Maccabee* preferred. Thus far this year I have collected eight but the season has only begun. * * *

Must get some more chopped bean straw to mulch the iris beds. This serves a double purpose, as a mulch holding off evaporation and keeping down weeds and as a fertilizer through leaching into the soil. Finally, it acts as a compost when I eventually work it under. The only difficulty is in getting somebody to grind it. * * * Have to keep in mind that the Annual Meeting of the American Iris Society is being held at Portland, Oregon, this year, about May 15th. A long time since it came to this Coast; Nashville, Tennessee, last year and Omaha, Nebraska, next. That is, if they get Omaha dug out of the snow before then. * * *

FROM THE FILES . . .

Our Native Shrubs

K. O. SESSIONS

The *Ceanothus* (Wild Lilac), most conspicuous at the eastern end of the Mussey grade leading to Ramona on April 1st, was the variety *divaricatus*, and the *C. integerrimus* was quite out of bloom and setting seed quite heavily. The former has a roundish light green leaf, while *integerrimus* has a small dark green leaf and the shrub is of lower growth and more spreading. Plants of these two varieties have been particularly fine at the U. S. Government Horticultural Station on the Torrey Pines Road this past month. The one in my own garden, *divaricatus*, has flowered well but the growth has been very scraggly. It would be best held up and supported to make a shapely bush. The native plants on the Mussey grade were very shapely and attractive. The very bushy white flowering variety along the crest of Point on the Torrey Pines road and all the way to Del Mar is a January bloomer and is *C. Vericosa*, referring to the warty growth on its stems. There is a slender growing white one along the Mussey grade that has a very naked stem and a small bushy top. The plants were all 8 to 10 feet high. This variety was not in bloom April 1st and was new to me and must be determined. The *Rhus Ovata* was particularly conspicuous. It is unfortunate that it does not flourish near the coast, for it is such a fine complement to our coast variety, *Rhus integrifolia*.

For Lath House Beauty

NOW READY

Sprouted Bulbs of

Tuberous Begonia
Yellow Calla Lily
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Floral Association News

In the very near future the San Diego Floral Association expects to be re-established in its own old building in Balboa Park after being homeless since the beginning of the last world war. Some of the cherished old possessions will come out of storage and meetings will once more be held in familiar surroundings. The Association will not forget, however, the kindness of the Theosophical Society in giving it a place to meet during these years.

Mrs. Clark, the Floral Association's president, hopes that it will be possible to open the building to members with an Azalea tea before the spring flower show which is planned now for May 7th and 8th. Plans are by no means completed but those who went to the Camellia show know what an attractive setting the building can provide for a display of flowers.

Members will be notified as soon as a date is set for returning to the building in the park. Later in the year one of the larger park buildings will probably be the setting for a major show on a grand scale.

GARDEN MORE ATTRACTIVE IF BIRDS MADE WELCOME

By planting trees and shrubs which provide shelter, protection and food for birds we can do much to attract to our gardens these welcome visitors, whose colorful plumage and delightful song add so much to garden enjoyment.

There need be no sacrifice of beauty in design, in order to work into the garden picture a corner of such planting. Here the permanent residents of the garden and transient guests may bathe, in the sunshine, without fear of enemies springing upon them from cover too nearby.

In other parts of the grounds, there may be bird houses for those that prefer a home provided by man. Some will prefer to build their nests in thorny haw trees, which maulrauding cats will find it difficult to penetrate. Evergreens in the border will break the wind in winter for our feathered friends which brave this inclement season.

Flower Arrangement Classes Offered

The San Diego Fine Arts Gallery has announced that from April 4th to 16th there will be classes in Japanese flower arrangements under the direction of Mrs. Chiura Obata. Mrs. Obata is qualified to instruct in the six types of arrangement which are recognized by experts in this ancient and formal art form.

Two separate classes of six lessons each will be offered. One will be Mondays, Wednesdays and Fridays, in the morning on Mondays and Wednesdays and in the afternoon on Fridays. The Tuesday, Thursday and Saturday class will meet at the same time each day from 9 a.m. to 12 noon. Price for the six lessons will be ten dollars. Those who are interested are being urged to get in touch with the Fine Arts Gallery at once as classes, naturally, cannot be unlimited.

PEAT MOSS

What kind of soil do you have in your garden? Do you labor with sticky clay? Is it hard yet fertile adobe? Gravelly or stony? Or are you trying to induce loose sand to hold fertility? Any such soil is a problem in any garden but don't worry with it any longer. You can quickly and easily correct it by mixing granulated peat moss into it. It will make a crumbly loam of it and supply the humus material your soil needs. Don't take halfway measures. There is no danger in using too much peat moss. It cannot possibly burn or rot the roots of plants.

SUMAC

If you have a corner of your yard to which it is difficult to get water, try one of the sumacs, and after a year or two, to allow the roots to penetrate deeply, let it have only what water the seasons bring. Not only will you save yourself much trouble, but you will also save on the water bill. And you will have an attractive green shrub throughout the year. Most large dealers stock the Lemonade Berry at all times; they have the Sugar Berry part of the time, and the Laurel Sumac can be obtained, as a rule, only from those dealers who specialize in native plants.

SHOPPERS' GUIDE

PATRONIZE OUR ADVERTISERS

LOCATION	FIRM	SPECIALTIES
SAN DIEGO DOWNTOWN	Albright's Farm & Garden Store 702 Ninth Ave., F-5822 Dunning's, Inc. 909 Sixth Ave., F-5387 Millar Seed Co. 733 Broadway, M-0219 Rainford Flower Shop 2140 Fourth Ave., F-7101	Seeds, Garden Equipment Fertilizers, Hardware Seeds, Bulbs, Pet Supplies Seeds, China, Curios Birds and Cages Cut Flowers, Corsages, Plants Della Robbia Wreaths
MIDDLETOWN	Whitney's Dept. Store 946 Sixth Ave., F-8262 Reynard Way Camellia Gardens 2661 Reynard Way, W-1493	Tools, Plants, Seeds Gardening Accessories Camellias, Cymbidium of all types
HILLCREST	Washington Street Nursery 510 W. Washington, J-8228	Ornamental Shrubs, Hedges Roses, Camellias
MISSION HILLS	Mission Hills Nursery 1525 Ft. Stockton Dr., J-2808	Pottery, Roses Garden Supplies
LOMA PORTAL	Walter Andersen's Nurseries 3860 Rosecrans, J-3721 Farmer's Market Branch of Point Loma's Nursery 2790 Midway Drive, B-8450	Gift Certificates, Camellias, Fruit Trees Bare-Root Roses, Bare-Root Fruit Trees
MISSION VALLEY	Benard's Mission Valley Nursery Between Cabrillo Freeway and	Roses, Bedding Plants, Perennials, Shrubs, Trees
OCEAN BEACH	Montalvo Gardens 4455 Montalvo St., B-4070 Old Town, J-2648	Rex Begonias, Ferns Sub-Tropical Plants
LINDA VISTA	Point Loma Nursery 1150 Greenwood, W-3588	Bare-Root Roses, Bare-Root Fruit Trees
EAST SAN DIEGO	Kniffing Brothers Nurseries 5503 El Cajon Blvd., T-7881	Trees and Shrubs Retail and Wholesale
LOGAN HEIGHTS	George F. Otto & Son 3572 Logan Ave., M-2871	Trees, Plants, Cut Flowers
NATIONAL CITY, CALIF.	F. W. James & Son 510 National Ave., G-7-4151	Dormant Roses, Fruit & Citrus Trees, Cut Flowers, Gifts
CHULA VISTA, CALIF.	Tractor Dawson Licensed Contractor, H-2-2534	Landscaping, Lot Grading, Top Soil, Sprinkler Systems
CORONADO, CALIF.	F. W. James & Son 145 Orange Ave., H-3-3550	Seeds, Ornamental Shrubs Roses
LA JOLLA, CALIF.	Armacost Garden Shop 5505 La Jolla Blvd., G-5-3751	Fertilizers, Tools, Sprays, Garden Supplies
LA MESA, CALIF.	70th Street Nursery & Gardening Service 4375 70th Street, H-6-6165	Weekly Yard Maintenance, General Yard Clean Up
LEMON GROVE, CALIF.	Hunter's Nursery 3110 Sweetwater Road, H-6-3893	Citrus and Avocado Trees, Peat Moss

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